

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Claims 1-46 (canceled)

Claim 47. (New): A detergent comprising an enriched methyl ester sulfonate composition comprising about 50 weight percent to about 75 weight percent of a first methyl ester sulfonate comprising different chain lengths, including a C<sub>16</sub> or C<sub>18</sub> methyl ester sulfonate, wherein the first methyl ester sulfonate is prepared from a natural fat or oil, and about 50 weight percent to about 25 weight percent of a second methyl ester sulfonate comprising predominantly a C<sub>16</sub> or C<sub>18</sub> methyl ester sulfonate, the second methyl ester sulfonate enriching the C<sub>16</sub> or C<sub>18</sub> methyl ester sulfonate content of the first methyl ester sulfonate.

Claim 48. (New): The detergent of claim 47, wherein the composition is enriched for C<sub>16</sub> methyl ester sulfonate.

Claim 49. (New): The detergent of claim 47, wherein the composition comprises at least about 25 weight percent of the second methyl ester sulfonate, based on the total weight percent of methyl ester sulfonates.

Claim 50. (New): The detergent of claim 47, wherein the composition comprises at least about 35 weight percent of the second methyl ester sulfonate, based on the total weight percent of methyl ester sulfonates.

Claim 51. (New): The detergent of claim 47, wherein the composition comprises about 50 weight percent of the second methyl ester sulfonate, based on the total weight percent of methyl ester sulfonates.

Claim 52. (New): The detergent of claim 47, wherein the first methyl ester sulfonate is prepared from palm kernel oil, cohune oil or coconut oil, and the second methyl ester sulfonate is prepared from palm stearine oil or tallow.

Claim 53. (New): The detergent of claim 47, wherein the second methyl ester sulfonate comprises predominately C<sub>16</sub> chain lengths.

Claim 54. (New): The detergent of claim 47, wherein the first methyl ester sulfonate comprises C<sub>10</sub>, C<sub>12</sub>, C<sub>14</sub>, C<sub>16</sub>, and C<sub>18</sub> chain lengths and the second methyl ester sulfonate comprises predominately C<sub>16</sub> chain lengths.

Claim 55. (New): The detergent of claim 47, further comprising a nonionic surfactant, a cationic surfactant, another anionic surfactant, a zwitterionic surfactant, a polymer dispersant, an oxidizing agent, a biocidal agent, a foam regulator, a binder, an anticaking agent, an activator, a catalyst, a thickener, a stabilizer, a UV protector, a fragrance, a soil suspending agent, a filler, a brightener, a enzyme, a salt, or an inert ingredient.

Claim 56. (New): The detergent of claim 55, comprising a nonionic surfactant, a builder and an enzyme.

Claim 57. (New): The detergent of claim 46, which is substantially free of secondary anionic surfactant.

Claim 58. (New): A detergent comprising at least about 5 weight percent of a methyl ester sulfonate prepared from natural fats or oils and having a C<sub>16</sub>-enriched methyl ester sulfonate content.

Claim 59. (New): The detergent of claim 58, wherein the mixture comprises a first methyl ester sulfonate comprising C<sub>10</sub>, C<sub>12</sub>, C<sub>14</sub>, C<sub>16</sub>, and C<sub>18</sub> chain lengths and a second methyl ester sulfonate comprising predominately C<sub>16</sub> chain lengths.

Claim 60. (New): The detergent of claim 58, wherein the mixture comprises at least about 35 weight percent C<sub>16</sub> chain lengths.

Claim 61. (New): The detergent of claim 58, wherein the mixture comprises at least about 50 weight percent C<sub>16</sub> chain lengths.

Claim 62. (New): The detergent of claim 58, further comprising as nonionic surfactant, a cationic surfactant, another anionic surfactant, a zwitterionic surfactant, a polymer dispersant, an oxidizing agent, a biocidal agent, a foam regulator, a binder, an anticaking agent, an activator, a catalyst, a thickener, a stabilizer, a UV protector, a fragrance, a soil suspending agent, a filler, a brightener, a enzyme, a salt, or an inert ingredient.

Claim 63. (New): The detergent of claim 58, comprising a nonionic surfactant, a builder and an enzyme.

Claim 64. (New): The detergent of claim 58, which is substantially free of secondary anionic surfactant.